

Delivering Electronic Files

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List of Internet Web Addresses

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Delivering Electronic Files

Electronic files are required to be delivered for each drawing, specification, engineering technical report, and all other related documents. Electronic formats shall be provided for drawings and specifications as shown below. All electronic files are to look and print exactly like any hard copy submitted for review -- in terms of line width, shading, font height & width, and paper size & orientation.

1. FILE FORMAT.

All electronic documents shall be provided in their native file format (no conversions from other software) as required by the End-User/Customer Requirements within Section 01330 of the Specifications.

a. **Specifications** Electronic specification files shall be provided in both word processing (SPECSINTACT .sec) and Adobe format (.ps or .pdf). More information regarding production of postscript files or Adobe Acrobat PDF format can be found at our Criteria Bulletin Board Web Site <http://www.cbbs.spk.usace.army.mil/html/aeguide.html>.

b. **Other Reports, Correspondence, Manuals, Certificates** All documents submitted in paper shall also be submitted as electronic files in, as a minimum, Adobe format (.ps or .pdf). Wordprocessing and/or Cadd files will be appreciated, only in addition to, the Adobe format. Examples, not all inclusive, of these types of documents are:

- i. Test Reports
- ii. Warranty Information
- iii. O & M Manuals
- iv. Certificates
- v. Contract Modification Report
- vi. Project Letters

If the information needs to be scanned, refer to the section on Scanned Files. More information regarding production of postscript files or Adobe Acrobat PDF format can be found at our Criteria Bulletin Board Web Site <http://www.cbbs.spk.usace.army.mil/html/aeguide.html>.

c. **Plans / Cadd Files** Electronic drawing files shall be provided in both vector (.dwg or .dgn) and raster (.cal) format. The vector format is specified under End-User/Customer Requirements within Section 01330 of the Specifications. More information regarding the CAL raster format and production procedures can be found at our Criteria Bulletin Board Web Site <http://www.cbbs.spk.usace.army.mil/html/aeguide.html>. Sacramento District CADD drawing standards are located at Internet address: <http://www.spk.usace.army.mil/cespk-ed/cadd/standards.html>.

d. Scanned Files

i. **As Part of Plan Set** Drawings or photographic images which are scanned shall be in a format which is fully compatible (e.g., as a .bmp, .cal,) with the native CADD package specified under End-User/Customer Requirements within Section 01330 of the Specifications. Scanned images shall also be inserted within the standard Sacramento District border sheet and delivered in both CADD and CAL raster format as described under paragraph titled Plans / Cadd Files. This requirement shall be used for all scanned sheets regardless of paper size.

ii. **As Part of Text Documents** Text, sketches, drawings or photographic images which are scanned shall be in a format which is fully compatible (e.g., as a .bmp, .tif, .pcx) with the native software program being used for that particular document. Acceptable software programs are shown under End-User/Customer Requirements within Section 01330 of the Specifications. Scanned pages shall be inserted into the software package and delivered in both the native software format and Adobe Acrobat .pdf format. This requirement shall be used for paper sizes of 8.5" x 14" or less. Paper sizes greater than this shall be packaged separate from the text document, referenced within the text document, and delivered according to paragraph titled Plans / Cadd Files.

e. **Filenames** No hyphens or special characters are to be used within any filename, with the exception of the underscore character. Specific filenames are required for all plans and specifications. See Filenaming Standards located on our Criteria Bulletin Board Web Site <http://www.cbbs.spk.usace.army.mil/html/aeguide.html>.

2. DELIVERY MEDIA

The electronic digital media shall be in the format which can be read and processed by the target operating system as required by the End-User/Customer Requirements within Section 01330 of the Specifications. The files shall be copied to the delivery media. Files transferred to the delivery media using backup utility commands will not be accepted.

a. **Floppy Disks** For projects with files or sets of files less than or equal to 5.5 megabytes total, the files may be provided on 3 ½-inch high-density floppy disks with a maximum of four (4) diskettes.

b. **ZIP and JAZ Disks** Due to varied use of this technology within the Government, approval of the Corps of Engineer's Project Manager must be obtained before delivery using this media.

c. **CD-ROM** Any projects with electronic digital files or sets of files may use compact disc, read-only memory (CD-ROM) for delivery. CD-ROM shall be used for all projects with files or sets of files greater than 5.5 megabytes total.

3. LABELING, INDEXING & DIRECTORY STRUCTURE

a. **Labeling** The external label for each electronic digital media shall contain, as a minimum, the following information:

- (1) The Contract Number and date.
- (2) The sequence number of the digital media. (ie, Disk 1 of 3)
- (3) Your Company Name, point of contact name & phone #

b. **Indexing** An index in ascii format (index.txt) to the electronic files shall be provided on the delivery media. This text file shall contain the following information, as a minimum, for each electronic file:

Filename, title of document, software name and version used

c. **Directory Structure** The directory structure of the disks or CD-ROM furnished by the Government upon contract award shall serve as an example of the directory structure requirements for submitting new files. Refer to Figure 1, Directory Structure for instructions on directory names and heirarchy. Note that there is a potential for other discipline directory names depending on the type of project. The requirement is for a consistent discipline directory structure with new directories added for submittals during construction.

i. **Multiple Disks or CD-ROMs** If the total package of electronic files to be submitted is so large that it has to be spanned across more than one disk or CD-ROM, parse out entire subdirectories. Start with the lowest level subdirectories and include the entire directory structure heirarchy (entire path) along with all files associated with those directories. Refer to Figure 2, Multiple Disk Directory Structure.

4. OTHER REQUIREMENTS

a. **Virus Free Certification** A certification shall be provided stating that all delivery media are free of known computer viruses. A statement including the name(s) and release date(s) of the virus-scanning software used to analyze the delivery media, the date the virus scan was performed, and the operator's name shall also be included with the certification. The release or version date of the virus-scanning software shall be the current version which has detected the

latest known viruses at the time of delivery of the digital media. These certification statements shall be in electronic format and may include the virus log file in ascii text format (virus.txt).

b. **Backup Copies** A signed statement shall be provided which indicates that the A-E will retain a copy of all delivered electronic digital media (with all files included) for at least one year after approval and, during this period of time, will provide up to two (2) additional copies of each to the Government, if requested, at no additional cost.

c. **Related Files and Documentation** To assure the customer can print the CADD files with appropriate results and use or change the files for as-built conditions, documentation and other resource files shall be provided on the delivery media as listed below:

i. **AutoCAD** All xreference files. Also when other than SPK drawing standards are used, the following shall also be provided: Plot configuration file, layer settings file, font files, menu files

ii. **Microstation** All reference files and resource information: pen table, any IRAS B or C files

5. OWNERSHIP

The Government, for itself and such others as it deems appropriate, will have unlimited rights under this contract to all information and materials developed under this contract and furnished to the Government and documentation thereof, reports, and listings, and all other items pertaining to the work and services pursuant to this agreement including any copyright. Unlimited rights under this contract are rights to use, duplicate, or disclose text, data, drawings, and information, in whole or in part in any manner and for any purpose whatsoever without compensation to or approval from the Contractor.

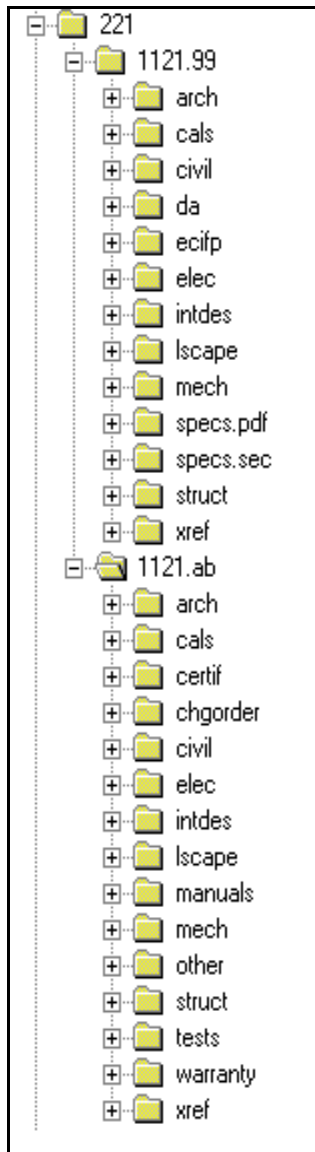
The Government will at all reasonable times have the right to inspect the work and will have access to and the right to make copies of the above-mentioned items. All text, electronic digital files, data, and other products generated under this contract shall become the property of the Government.

6. CHECKLIST BEFORE DELIVERY

- ☐ File formats and software meet requirements of Specifications Section 01330
- ☐ Index.txt file created
- ☐ Related files & documentation organized
- ☐ Adobe .ps or .pdf files created for text
- ☐ CALS raster files created for CADD files
- ☐ Virus certification created
- ☐ Signed statement regarding backup copies created
- ☐ Disks labeled

DIRECTORY STRUCTURE EXAMPLE

EXPLANATIONS



.99 = As Designed / Advertised Files (99% Complete)

CALS = Cals raster format files for viewing

DA = Design Analysis files

ECIFP = Engr'g Considerations & Instructions to Field Personnel

.PDF = Specs in Adobe PDF format for viewing

.SEC = Specs in SpecsIntact format for editing

XREF = AutoCad xref files necessary for plan dwgs

.AB = As Built / Constructed Files (to be added by Contractor)

CERTIF = Copies of Certificates for submittal

CHGORDER = Files of Mods/ Change Orders during Construction

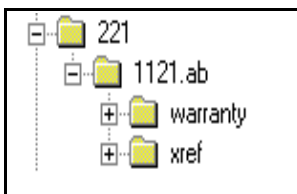
MANUALS = Files for O&M Manuals

OTHER = Files for Miscellenous Submittal Documents

TESTS = Copies of Test Reocrds & Results submitted during Const.

WARRANTY = Copies of Manufacturer's warranties

Figure 1 Directory
Structure



Example of directory structure for 2nd or subsequent disks, where the only directories that have files are "WARRANTY" and "XREF". These two directories would not be shown on DISK #1.

Figure 2 Multiple
Disk Directory
Structure